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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,975	07/07/2003	Michael Redecker	6161.0066.AA	6522

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,975

Applicant(s)

REDECKER, MICHAEL

Examiner

Kevin Quarterman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and remarks received 22 August 2005 have been entered.

Allowable Subject Matter

2. The indicated allowability of claims 1-19 is withdrawn in view of the newly discovered reference to Leising. Rejections based on the newly cited reference follow.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the screen cited in claim 14 must be shown or the feature canceled from the claim. No new matter should be entered.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 8 cites "the light-emitting polymer is a material selected from the group *comprising* polyphenylene vinylene or the group *comprising* polyfluorene" in lines 2-4 of the claim. The use of the term "comprising" is improper in the Markush groups (MPEP § 2173.05(h)).

8. The term "high" in claim 10 is a relative term which renders the claim indefinite. The term "high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The limitation of the excitation light source having a *high* quota of blue light and ultraviolet rays is rendered indefinite by the use of the term "high" in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Leising (US 6,117,529).

11. Regarding independent claim 1, Figure 3 of Leising shows a display comprising a substrate (1) with a plurality of sub-pixels arranged on at least a first side of the substrate, wherein each sub-pixel comprises a first electrode (2) having a first polarity; a second electrode (6) having a second polarity; and an emitter layer (3), wherein the emitter layer is interposed between the first electrode and the second electrode. The Examiner notes that apparatus claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114). Thus, the properties of the light emitted by the emitter layer and the light source exciting the emitter layer have not been given patentable weight. The Examiner also notes that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining the patentability of the apparatus claim (MPEP § 2115).

12. Regarding claim 2, Leising discloses the substrate formed of a transparent material (col. 9, ln. 42-44), the first electrode adjacent to the first side of the substrate, the first electrode formed of a transparent material (col. 11, ln. 36-40), and the second electrode formed of a light-reflecting material (col. 11, ln. 12-20).

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13. Regarding claim 3, the first electrode adjacent to the first side of the substrate, the first electrode formed of a light-reflecting material (col. 11, ln. 12-20), and the second electrode formed of a transparent material (col. 11, ln. 36-40).

14. Regarding claim 4, Leising discloses the first electrode and the second electrode formed of a transparent material (col. 11, ln. 36-40).

15. Regarding claim 5, Figure 3 of Leising shows a dielectric mirror (10) arranged on the sub-pixels and the first electrode and the second electrode formed of a transparent material (col. 11, ln. 36-40).

16. Regarding claim 6, Figure 3 of Leising shows a dielectric mirror (10) arranged on the sub-pixels and the first electrode and the second electrode formed of a transparent material (col. 11, ln. 36-40).

17. Regarding claim 7, the Examiner notes that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining the patentability of the apparatus claim (MPEP § 2115). Thus, the properties of the operation of the photoluminescence quenching device have not been given patentable weight.

18. Regarding claim 8, Leising discloses the emitter layer formed of at least one of a low molecular organic material, and a light-emitting polymer, and the light-emitting polymer being a material selected from the group comprising polyphenylene vinylene or the group comprising polyfluorene (col. 8, ln. 64-66).

19. Regarding claim 9, Figure 4 of Leising shows a hole transport layer (12) interposed between the first electrode and the emitter layer, the hole transport layer

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formed of at least one of polyethylene dioxy thiophene, polystyrene sulfone acid, and polyaniline (col. 13, ln. 4-20).

20. Regarding claim 10, Leising discloses the excitation light source with a high quota of blue light (col. 13, ln. 48-53).

21. Regarding claim 11, Leising discloses the excitation light source being a light-emitting diode (col. 11, ln. 45-48).

22. Regarding claim 12, Leising discloses the excitation light source located outside of the display (col. 11, ln. 45-48).

23. Regarding claim 13, Figure 3 of Leising shows an optical unit (10) which can adjust the light emitted from the emitter layer.

24. Regarding claim 14, Figure 1 of Leising shows a screen on which an image is formed with the light emitted from the emitter layer.

25. Regarding claim 15, Leising discloses the dielectric mirror having a bandwidth narrower than a wavelength of the light emitted from the emitter layer (col. 14, ln. 56-62).

26. Regarding claim 16, Leising discloses the dielectric mirror having a bandwidth narrower than a wavelength of the light emitted from the emitter layer (col. 14, ln. 56-62).

27. Regarding claim 17, Leising discloses the dielectric mirror including a plurality of refraction layer having different refractive indices (col. 14, ln. 56-59).

28. Regarding claim 18, Leising discloses the dielectric mirror including a plurality of refraction layer having different refractive indices (col. 14, ln. 56-59).

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29. Regarding claim 19, Leising discloses a low-refractive index refraction layer of the plurality of refraction layer formed of at least one of silicon dioxide, silicon nitride, and magnesium fluoride, and a high-refractive index refraction layer of the plurality of refraction layers formed of at least one of titanium dioxide, tin oxide, zirconium oxide, and tantalic oxide (col. 14, ln. 56-59).

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
14 November 2005


Joseph Williams
Primary Examiner
Art Unit 2879